

## REMARKS

Claims 24, 26, 29-41, 43, 45, and 47-57 are pending in the present application. In this amendment claims 24, 36, 39, 41, 43, 45 and 48-50 have been amended. The Applicant respectfully requests that these amendments be entered. Additionally, new claims 52-57 have been added. The Applicant respectfully requests that these new claims be added because independent apparatus claim 52 mirrors elements found in allowed claim 29. The Applicant also traverses all the rejections in the present Office Action and requests reconsideration of the rejected claims.

Claims 36, 39, and 43 were rejected under 35 U.S.C. §112, second paragraph. The Applicant submits that the amendments to these claims address and resolve this rejection.

Claims 24-26, 30, 34, 35, 45, 47, and 49-50 were rejected under 35 U.S.C. §102(e) as being anticipated by Yamane et al. (U.S. Patent No. 5,764,404). The Applicants respectfully traverses this rejection for the following reasons.

With respect to independent claim 24, the Office Action asserts that Yamane et al. disclose all of the elements of this claim. The Applicant respectfully disagrees and submits that claim 24 is not taught or suggested by the prior art of record. In particular, claim 24 has been amended to include elements of claims 27 and 28. Additionally, the feature of “selectively setting at least one of a level and wavelength” of pump signals has been added. Support for this amendment may be found, as an example, on pages 7 and 8 of the amended sheets in the present application. In particular, Yamane et al. does not teach the feature of having pump signals with wavelengths less than and greater than transmitting signals. In particular, the injected excitation beam signals are set at 1,480 nm, both of which are below the 1,535 nm wavelength of the optical signal. (See Yamane et al., column 10, lines 42-60). Thus, Yamane et al. does not teach or even suggest introduction of excitation beams greater than the wavelength of the optical signal.

Additionally, the Office Action has asserted that Inagaki et al. discloses the elements of claim 28, which have been incorporated into independent claim 24. Nonetheless, neither Yamane et al. or Inagaki et al. teach or suggest that the injected pump signals of both pump signal sources are adjustable. Specifically, Yamane does not teach or suggest either of the pump signals being adjustable, but rather teaches a fixed constant wavelength setting. Inagaki et al.,

teaches only varying wavelength of one of the pumping light sources 40 (See column 4, line 60-62). In teaching wavelength control of only one pumping light source, this belies any suggestion to one of ordinary skill in the art that both pumping light sources being variable would be desirable over merely the one variable light source taught by Inagaki.

In light of the foregoing comments, the Applicant respectfully submits that claim 24, as amended, is allowable over the prior art of record and requests that the rejection be withdrawn, accordingly. With respect to dependent claims 26, 30-36, 39, 41, and 43, these claims are submitted to be allowable at least by virtue of their ultimate dependency on independent claim 24.

With respect to independent apparatus claim 45, this claim has been amended to include correlative features to that of claim 24 and, thus, the Applicant respectfully submits that this claim is allowable at least for the reasons given above.

Finally, claims 47-51 are submitted to be allowable at least by virtue of their ultimate dependency on independent claim 45.

In light of the foregoing comments the Applicant submits that the application is in condition for allowance and requests a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BELL, BOYD & LLOYD, LLC

BY 

Patrick B. Law

Reg. No. 41,549

P.O. Box 1135

Chicago, Illinois 60690-1135

Phone: (312) 781-6801

Dated: October 15, 2003